

# Michael Sander

## List of Publications by Year in descending order

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87  
papers

7,974  
citations

47006

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49909

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90  
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90  
docs citations

90  
times ranked

7118  
citing authors

#	ARTICLE	IF	CITATIONS
1	Redox Properties of Plant Biomass-Derived Black Carbon (Biochar). <i>Environmental Science &amp; Technology</i> , 2014, 48, 5601-5611.	10.0	791
2	Novel Electrochemical Approach to Assess the Redox Properties of Humic Substances. <i>Environmental Science &amp; Technology</i> , 2010, 44, 87-93.	10.0	490
3	Antioxidant Properties of Humic Substances. <i>Environmental Science &amp; Technology</i> , 2012, 46, 4916-4925.	10.0	471
4	Humic substances as fully regenerable electron acceptors in recurrently anoxic environments. <i>Nature Geoscience</i> , 2014, 7, 195-200.	12.9	439
5	Biodegradation of synthetic polymers in soils: Tracking carbon into CO <sub>2</sub> and microbial biomass. <i>Science Advances</i> , 2018, 4, eaas9024.	10.3	284
6	Chemical Oxidation of Dissolved Organic Matter by Chlorine Dioxide, Chlorine, And Ozone: Effects on Its Optical and Antioxidant Properties. <i>Environmental Science &amp; Technology</i> , 2013, 47, 11147-11156.	10.0	244
7	Photooxidation-Induced Changes in Optical, Electrochemical, and Photochemical Properties of Humic Substances. <i>Environmental Science &amp; Technology</i> , 2014, 48, 2688-2696.	10.0	211
8	Electrochemical Analysis of Proton and Electron Transfer Equilibria of the Reducible Moieties in Humic Acids. <i>Environmental Science &amp; Technology</i> , 2011, 45, 8385-8394.	10.0	208
9	Viruses at Solid-Water Interfaces: A Systematic Assessment of Interactions Driving Adsorption. <i>Environmental Science &amp; Technology</i> , 2016, 50, 732-743.	10.0	199
10	Dark Formation of Hydroxyl Radical in Arctic Soil and Surface Waters. <i>Environmental Science &amp; Technology</i> , 2013, 47, 12860-12867.	10.0	198
11	Hydroxyl Radical Formation upon Oxidation of Reduced Humic Acids by Oxygen in the Dark. <i>Environmental Science &amp; Technology</i> , 2012, 46, 1590-1597.	10.0	184
12	Characterization of Charcoal Adsorption Sites for Aromatic Compounds: Insights Drawn from Single-Solute and Bi-Solute Competitive Experiments. <i>Environmental Science &amp; Technology</i> , 2005, 39, 1606-1615.	10.0	180
13	Biodegradation of Polymeric Mulch Films in Agricultural Soils: Concepts, Knowledge Gaps, and Future Research Directions. <i>Environmental Science &amp; Technology</i> , 2019, 53, 2304-2315.	10.0	169
14	A Thermodynamically Based Method to Quantify True Sorption Hysteresis. <i>Journal of Environmental Quality</i> , 2005, 34, 1063-1072.	2.0	141
15	Triplet Photochemistry of Effluent and Natural Organic Matter in Whole Water and Isolates from Effluent-Receiving Rivers. <i>Environmental Science &amp; Technology</i> , 2015, 49, 3453-3463.	10.0	135
16	Redox Properties of Structural Fe in Clay Minerals: 3. Relationships between Smectite Redox and Structural Properties. <i>Environmental Science &amp; Technology</i> , 2013, 47, 13477-13485.	10.0	131
17	Analysis and Sorption of Psychoactive Drugs onto Sediment. <i>Environmental Science &amp; Technology</i> , 2008, 42, 6415-6423.	10.0	130
18	Redox Properties of Structural Fe in Clay Minerals. 1. Electrochemical Quantification of Electron-Donating and -Accepting Capacities of Smectites. <i>Environmental Science &amp; Technology</i> , 2012, 46, 9360-9368.	10.0	125

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19	Electrochemical Analyses of Redox-Active Iron Minerals: A Review of Nonmediated and Mediated Approaches. <i>Environmental Science &amp; Technology</i> , 2015, 49, 5862-5878.	10.0	120
20	Redox Properties of Structural Fe in Clay Minerals. 2. Electrochemical and Spectroscopic Characterization of Electron Transfer Irreversibility in Ferruginous Smectite, SWa-1. <i>Environmental Science &amp; Technology</i> , 2012, 46, 9369-9377.	10.0	115
21	Electron-Donating Phenolic and Electron-Accepting Quinone Moieties in Peat Dissolved Organic Matter: Quantities and Redox Transformations in the Context of Peat Biogeochemistry. <i>Environmental Science &amp; Technology</i> , 2018, 52, 5236-5245.	10.0	110
22	Protein Encapsulation by Humic Substances. <i>Environmental Science &amp; Technology</i> , 2011, 45, 6003-6010.	10.0	109
23	Thermodynamic Characterization of Iron Oxide- <sup>Aqueous Fe<sup>2+</sup></sup> Redox Couples. <i>Environmental Science &amp; Technology</i> , 2016, 50, 8538-8547.	10.0	106
24	Sustainable Polyester Elastomers from Lactones: Synthesis, Properties, and Enzymatic Hydrolyzability. <i>Journal of the American Chemical Society</i> , 2018, 140, 963-973.	13.7	102
25	Low Molecular Weight Components in an Aquatic Humic Substance As Characterized by Membrane Dialysis and Orbitrap Mass Spectrometry. <i>Environmental Science &amp; Technology</i> , 2012, 46, 9350-9359.	10.0	93
26	Enzymatic Hydrolysis of Polyester Thin Films at the Nanoscale: Effects of Polyester Structure and Enzyme Active-Site Accessibility. <i>Environmental Science &amp; Technology</i> , 2017, 51, 7476-7485.	10.0	89
27	Environmental Fate of RNA Interference Pesticides: Adsorption and Degradation of Double-Stranded RNA Molecules in Agricultural Soils. <i>Environmental Science &amp; Technology</i> , 2019, 53, 3027-3036.	10.0	89
28	Dos and Do Nots When Assessing the Biodegradation of Plastics. <i>Environmental Science &amp; Technology</i> , 2019, 53, 9967-9969.	10.0	87
29	Photosensitizing and Inhibitory Effects of Ozonated Dissolved Organic Matter on Triplet-Induced Contaminant Transformation. <i>Environmental Science &amp; Technology</i> , 2015, 49, 8541-8549.	10.0	80
30	Enzymatic surface hydrolysis of poly(ethylene furanoate) thin films of various crystallinities. <i>Green Chemistry</i> , 2017, 19, 5381-5384.	9.0	80
31	Quantification of Phenolic Antioxidant Moieties in Dissolved Organic Matter by Flow-Injection Analysis with Electrochemical Detection. <i>Environmental Science &amp; Technology</i> , 2016, 50, 6423-6432.	10.0	75
32	Cation Binding of Antimicrobial Sulfathiazole to Leonardite Humic Acid. <i>Environmental Science &amp; Technology</i> , 2009, 43, 6632-6638.	10.0	73
33	Adsorption of Transgenic Insecticidal Cry1Ab Protein to SiO <sub>2</sub> . 1. Forces Driving Adsorption. <i>Environmental Science &amp; Technology</i> , 2010, 44, 8870-8876.	10.0	72
34	The Multiple States of Environmental DNA and What Is Known about Their Persistence in Aquatic Environments. <i>Environmental Science &amp; Technology</i> , 2022, 56, 5322-5333.	10.0	67
35	Solid phases as important electron acceptors in freshwater organic sediments. <i>Biogeochemistry</i> , 2015, 123, 49-61.	3.5	65
36	Electron accepting capacity of dissolved and particulate organic matter control CO <sub>2</sub> and CH <sub>4</sub> formation in peat soils. <i>Geochimica Et Cosmochimica Acta</i> , 2019, 245, 266-277.	3.9	65

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37	Enzymatic Degradation of Aromatic and Aliphatic Polyesters by <i>P. pastoris</i> Expressed Cutinase 1 from <i>Thermobifida cellulolytica</i> . <i>Frontiers in Microbiology</i> , 2017, 8, 938.	3.5	62
38	Covalent Binding of Sulfamethazine to Natural and Synthetic Humic Acids: Assessing Laccase Catalysis and Covalent Bond Stability. <i>Environmental Science &amp; Technology</i> , 2013, 47, 6916-6924.	10.0	60
39	Electrochemical Analysis of Changes in Iron Oxide Reducibility during Abiotic Ferrihydrite Transformation into Goethite and Magnetite. <i>Environmental Science &amp; Technology</i> , 2019, 53, 3568-3578.	10.0	60
40	Conditioning-Annealing Studies of Natural Organic Matter Solids Linking Irreversible Sorption to Irreversible Structural Expansion. <i>Environmental Science &amp; Technology</i> , 2006, 40, 170-178.	10.0	59
41	An Isotope Exchange Technique to Assess Mechanisms of Sorption Hysteresis Applied to Naphthalene in Kerogenous Organic Matter. <i>Environmental Science &amp; Technology</i> , 2005, 39, 7476-7484.	10.0	57
42	Quantification of Synthetic Polyesters from Biodegradable Mulch Films in Soils. <i>Environmental Science &amp; Technology</i> , 2020, 54, 266-275.	10.0	56
43	Variability of Nitrogen Isotope Fractionation during the Reduction of Nitroaromatic Compounds with Dissolved Reductants. <i>Environmental Science &amp; Technology</i> , 2008, 42, 8352-8359.	10.0	55
44	Dissolved Organic Matter Adsorption to Model Surfaces: Adlayer Formation, Properties, and Dynamics at the Nanoscale. <i>Environmental Science &amp; Technology</i> , 2014, 48, 9420-9429.	10.0	54
45	Decreases in Iron Oxide Reducibility during Microbial Reductive Dissolution and Transformation of Ferrihydrite. <i>Environmental Science &amp; Technology</i> , 2019, 53, 8736-8746.	10.0	52
46	Enhanced Indirect Photochemical Transformation of Histidine and Histamine through Association with Chromophoric Dissolved Organic Matter. <i>Environmental Science &amp; Technology</i> , 2015, 49, 5511-5519.	10.0	51
47	Adsorption of Insecticidal Cry1Ab Protein to Humic Substances. 1. Experimental Approach and Mechanistic Aspects. <i>Environmental Science &amp; Technology</i> , 2012, 46, 9923-9931.	10.0	49
48	Assessing the Effect of Humic Acid Redox State on Organic Pollutant Sorption by Combined Electrochemical Reduction and Sorption Experiments. <i>Environmental Science &amp; Technology</i> , 2012, 46, 3882-3890.	10.0	48
49	Adsorption of Transgenic Insecticidal Cry1Ab Protein to SiO <sub>2</sub> . 2. Patch-Controlled Electrostatic Attraction. <i>Environmental Science &amp; Technology</i> , 2010, 44, 8877-8883.	10.0	45
50	Photochemical Transformation of Poly(butylene adipate-co-terephthalate) and Its Effects on Enzymatic Hydrolyzability. <i>Environmental Science &amp; Technology</i> , 2019, 53, 2472-2481.	10.0	45
51	Quantification of the electron donating capacity and UV absorbance of dissolved organic matter during ozonation of secondary wastewater effluent by an assay and an automated analyzer. <i>Water Research</i> , 2020, 185, 116235.	11.3	44
52	Microbial reduction of ferrihydrite-organic matter coprecipitates by <i>Shewanella putrefaciens</i> and <i>Geobacter metallireducens</i> in comparison to mediated electrochemical reduction. <i>Chemical Geology</i> , 2016, 447, 133-147.	3.3	43
53	On the Reversibility of Sorption to Black Carbon: Distinguishing True Hysteresis from Artificial Hysteresis Caused by Dilution of a Competing Adsorbate. <i>Environmental Science &amp; Technology</i> , 2007, 41, 843-849.	10.0	42
54	Two analytical approaches quantifying the electron donating capacities of dissolved organic matter to monitor its oxidation during chlorination and ozonation. <i>Water Research</i> , 2018, 144, 677-689.	11.3	41

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55	Assessing the environmental transformation of nanoplastic through <sup>13</sup> C-labelled polymers. <i>Nature Nanotechnology</i> , 2019, 14, 301-303.	31.5	41
56	Adsorption of Insecticidal Cry1Ab Protein to Humic Substances. 2. Influence of Humic and Fulvic Acid Charge and Polarity Characteristics. <i>Environmental Science &amp; Technology</i> , 2012, 46, 9932-9940.	10.0	40
57	Sorption irreversibility of 1,4-dichlorobenzene in two natural organic matter-rich geosorbents. <i>Environmental Toxicology and Chemistry</i> , 2009, 28, 447-457.	4.3	37
58	Adsorption of Transgenic Insecticidal Cry1Ab Protein to Silica Particles. Effects on Transport and Bioactivity. <i>Environmental Science &amp; Technology</i> , 2011, 45, 4377-4384.	10.0	36
59	High-Throughput Analysis of Enzymatic Hydrolysis of Biodegradable Polyesters by Monitoring Coadsorption of a Polyester-Embedded Fluorogenic Probe. <i>Environmental Science &amp; Technology</i> , 2017, 51, 4358-4367.	10.0	35
60	Mediated Electrochemical Reduction of Iron (Oxyhydr-)Oxides under Defined Thermodynamic Boundary Conditions. <i>Environmental Science &amp; Technology</i> , 2018, 52, 560-570.	10.0	35
61	Enzymatic Hydrolysis of Polyester Thin Films: Real-Time Analysis of Film Mass Changes and Dissipation Dynamics. <i>Environmental Science &amp; Technology</i> , 2016, 50, 197-206.	10.0	34
62	Environmental Fate of Insecticidal Plant-Incorporated Protectants from Genetically Modified Crops: Knowledge Gaps and Research Opportunities. <i>Environmental Science &amp; Technology</i> , 2017, 51, 12049-12057.	10.0	34
63	Plant rhizosphere oxidation reduces methane production and emission in rewetted peatlands. <i>Soil Biology and Biochemistry</i> , 2018, 125, 125-135.	8.8	32
64	Competitive Coadsorption Dynamics of Viruses and Dissolved Organic Matter to Positively Charged Sorbent Surfaces. <i>Environmental Science &amp; Technology</i> , 2016, 50, 3597-3606.	10.0	29
65	Polyol Structure Influences Enzymatic Hydrolysis of Bio-Based 2,5-Furandicarboxylic Acid (FDCA) Polyesters. <i>Biotechnology Journal</i> , 2017, 12, 1600741.	3.5	29
66	Effects of eutrophication on sedimentary organic carbon cycling in five temperate lakes. <i>Biogeosciences</i> , 2019, 16, 3725-3746.	3.3	26
67	Redox properties of clay-rich sediments as assessed by mediated electrochemical analysis: Separating pyrite, siderite and structural Fe in clay minerals. <i>Chemical Geology</i> , 2017, 457, 149-161.	3.3	25
68	Redox Properties of Structural Fe in Smectite Clay Minerals. <i>ACS Symposium Series</i> , 2011, , 361-379.	0.5	22
69	Photooxidation of the Antimicrobial, Nonribosomal Peptide Bacitracin A by Singlet Oxygen under Environmentally Relevant Conditions. <i>Environmental Science &amp; Technology</i> , 2016, 50, 8586-8595.	10.0	22
70	Organic Matter from Redoximorphic Soils Accelerates and Sustains Microbial Fe(III) Reduction. <i>Environmental Science &amp; Technology</i> , 2021, 55, 10821-10831.	10.0	22
71	Effect of Solution pH on the Dual Role of Dissolved Organic Matter in Sensitized Pollutant Photooxidation. <i>Environmental Science &amp; Technology</i> , 2021, 55, 15110-15122.	10.0	22
72	Biomimetic Approach to Enhance Enzymatic Hydrolysis of the Synthetic Polyester Poly(1,4-butylene) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	9.4	21

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73	Redox Properties of Pyrogenic Dissolved Organic Matter (pyDOM) from Biomass-Derived Chars. <i>Environmental Science &amp; Technology</i> , 2021, 55, 11434-11444.	10.0	21
74	Spatiotemporal redox dynamics in a freshwater lake sediment under alternating oxygen availabilities: combined analyses of dissolved and particulate electron acceptors. <i>Environmental Chemistry</i> , 2016, 13, 826.	1.5	19
75	Analysis of RNA Interference (RNAi) Biopesticides: Double-Stranded RNA (dsRNA) Extraction from Agricultural Soils and Quantification by RT-qPCR. <i>Environmental Science &amp; Technology</i> , 2020, 54, 4893-4902.	10.0	17
76	Quantifying the electron donating capacities of sulfide and dissolved organic matter in sediment pore waters of wetlands. <i>Environmental Sciences: Processes and Impacts</i> , 2017, 19, 758-767.	3.5	16
77	Assessing the Indirect Photochemical Transformation of Dissolved Combined Amino Acids through the Use of Systematically Designed Histidine-Containing Oligopeptides. <i>Environmental Science &amp; Technology</i> , 2015, 49, 12798-12807.	10.0	15
78	Long-Term Warming Decreases Redox Capacity of Soil Organic Matter. <i>Environmental Science and Technology Letters</i> , 2021, 8, 92-97.	8.7	15
79	Oxidation of Reduced Peat Particulate Organic Matter by Dissolved Oxygen: Quantification of Apparent Rate Constants in the Field. <i>Environmental Science &amp; Technology</i> , 2018, 52, 11151-11160.	10.0	14
80	Thermodynamic controls on rates of iron oxide reduction by extracellular electron shuttles. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022, 119, .	7.1	14
81	Competitive co-adsorption of bacteriophage MS2 and natural organic matter onto multiwalled carbon nanotubes. <i>Water Research X</i> , 2020, 9, 100058.	6.1	13
82	Redox Properties of Peat Particulate Organic Matter: Quantification of Electron Accepting Capacities and Assessment of Electron Transfer Reversibility. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2021, 126, e2021JG006329.	3.0	8
83	Adsorption of double-stranded ribonucleic acids (dsRNA) to iron (oxyhydr-)oxide surfaces: comparative analysis of model dsRNA molecules and deoxyribonucleic acids (DNA). <i>Environmental Sciences: Processes and Impacts</i> , 2021, 23, 605-620.	3.5	8
84	Assessing the redox properties of iron-bearing clay minerals using homogeneous electrocatalysis. <i>Applied Geochemistry</i> , 2011, 26, S191-S193.	3.0	6
85	Effects of Macrofaunal Recolonization on Biogeochemical Processes and Microbiota in a Mesocosm Study. <i>Water (Switzerland)</i> , 2021, 13, 1599.	2.7	4
86	Site-Specific Mineralization of a Polyester Hydrolysis Product in Natural Soil. <i>ACS Sustainable Chemistry and Engineering</i> , 2022, 10, 1373-1378.	6.7	3
87	What does mediated electrochemistry reveal about regional differences in the redox properties of Boom Clay?. <i>Applied Geochemistry</i> , 2020, 120, 104681.	3.0	2